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## FACSIMILE TRANSMITTAL SHEET

DATE: October 13, 2009

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TO:

NAME/COMPANY	FACSIMILE NO.	
Examiner Leonard J. Weinstein Group Art Unit 3746 U.S. Patent and Trademark Office	571-273-9961	<input type="checkbox"/> SUCCESSFULLY FAXED
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FROM: Michael I. Markowitz

OUR FILE NO.: P/1336-201 RETURN TO: Laura C.

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## MESSAGE:

Applicant: John Stark  
Serial No.: 10/561,317  
Filed: December 20, 2005

Please find enclosed a draft Amendment for your review and consideration and for our discussion during our telephone interview today, October 13, at 3:00 p.m. I will call you then.

**-- DRAFT - FOR EXAMINER USE ONLY --**

P/1336-201

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

John Stark

Serial No.: 10/561,317

Filed: December 20, 2005

For: DOUBLE CONE FOR GENERATION OF A PRESSURE DIFFERENCE

Confirmation No.: 2795

Date: -- DRAFT --

Group Art Unit: 3746

Examiner: Leonard J. Weinstein

VIA EFS-WEB

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

AMENDMENT/SUBMISSION

Sir:

This is an Amendment filed in response to the Office Action mailed July 16, 2009 in the above-identified application. Reconsideration of the application is respectfully requested.

FEE CALCULATION

Any additional fee required has been calculated as follows:

  X  , If checked, "Small Entity" status is claimed.

	NO. CLAIMS AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR		EXTRA PRESENT		RATE	ADDIT. FEE
TOTAL	15	MINUS	20	* =	0	X	(\$26 SE or \$52)	\$ 0.00
INDEP.	3	MINUS	3	** =	0	X	(\$110 SE or \$220)	\$ 0.00
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM						X	(\$195 SE or \$390)	\$ 0.00
* not less than 20 ** not less than 3								TOTAL \$ 0.00

In the event the actual fee is greater than the payment submitted or is inadvertently not enclosed or if any additional fee during the prosecution of this application is not paid, the Patent Office is authorized to charge the underpayment to Deposit Account No. 15-0700.

**CONTINGENT EXTENSION REQUEST**

If this communication is filed after the shortened statutory time period had elapsed and no separate Petition is enclosed, the Commissioner of Patents and Trademarks is petitioned, under 37 C.F.R. § 1.136(a), to extend the time for filing a response to the outstanding Office Action by the number of months which will avoid abandonment under 37 C.F.R. § 1.135. The fee under 37 C.F.R. § 1.17 should be charged to our Deposit Account No. 15-0700.

**SUMMARY OF AMENDMENTS**

1. ☐ If checked, an abstract (an amended abstract) is submitted herewith.
2. ☐ If checked, amendment(s) to the drawings are submitted herewith.
3. ☐ If checked, amendment(s) to the specification are submitted herewith.
4. ☒ If checked, amendment(s) to the claims are submitted herewith.

**LISTING OF THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Withdrawn) A double-cone device of continuous geometry for creating a pressure difference in a fluid flowing through the device, the device comprising:

- a. a first tapering section of essentially hollow frustroconical shape; and
- b. a second diverging section of essentially hollow frustroconical shape,

wherein the section of minimum diameter of the device is an orifice of the device, wherein the second diverging section has a plurality of holes on its surface beyond the orifice in order to achieve suction.

2. (Withdrawn) The device according to claim 1, wherein conical angle of the first tapering section is greater than 0° and at most 10°, preferably at most 5°.

3. (Withdrawn) The device according to claim 1, wherein conical angle of the second diverging section is greater than 0° and at most 10°, preferably at most 4°.

4. (Withdrawn) The device according to claim 1, wherein the holes are of circular shape.

5. (Withdrawn) The device according to claim 1, wherein the holes are inclined in the direction of the flow of the fluid.

6. (Withdrawn) The device according to claim 1, wherein the holes have diameter that is less than half the diameter of the orifice section.

7. (Withdrawn) The device according to claim 1, wherein the holes are made at the orifice.

8. (Withdrawn) The device according to claim 1, wherein the holes are made on a portion of the second diverging section with diameter greater than the diameter of the orifice and less than 1.5 times the diameter of the orifice.

9. (Currently Amended) A double-cone device of continuous geometry for creating a pressure difference in a fluid flowing through the device, the device comprising:
- a first tapering section having an interior space of hollow frustroconical shape;
  - a second porous diverging section having an interior space of hollow frustroconical shape, the first tapering section and the second porous diverging section meeting at a neck at the smaller diameter end of the interior space of the first tapering section, the second porous diverging section extending from the neck, to achieve suction, the second porous diverging section having holes with sizes in the range of 50 to 500  $\mu\text{m}$ ; and
  - a third diverging section having an interior space of hollow frustroconical shape, extending from the larger diameter end of the interior space of the second porous section.
10. (Previously Presented) The device according to claim 9, wherein conical angle of the first tapering section is greater than  $0^\circ$  and at most  $10^\circ$ .
11. (Previously Presented) The device according to claim 9, wherein conical angle of the third diverging section is greater than  $0^\circ$  and at most  $10^\circ$ .
12. (Previously Presented) The device according to claim 9, wherein the second porous diverging section has an end with a larger diameter, the larger diameter being greater than a diameter of the smaller diameter end of the first tapering section and less than 1.5 times the diameter of the smaller diameter end of the first tapering section.
13. (Withdrawn) A double-cone device for creating a pressure difference in a fluid flowing through the device, the device comprising:
- a first tapering section of essentially hollow frustroconical shape;
  - a second diverging section of essentially hollow frustroconical shape; and
  - an insert section having a central hollow frustroconical portion, the hollow portion having the smaller diameter end matched to the smaller diameter end of the first tapering section and the larger diameter end matched to the smaller diameter end of the second diverging section, the insert extending from the smaller diameter end of first tapering section to the

beginning of the second diverging section, wherein the insert section has a plurality of radial holes on the central hollow portion to facilitate suction.

14. (Withdrawn) The device according to claim 13, wherein conical angle of the first tapering section is greater than  $0^\circ$  and at most  $10^\circ$ .

15. (Withdrawn) The device according to claim 13, wherein conical angle of the second diverging section is greater than  $0^\circ$  and at most  $10^\circ$ , preferably at most  $2^\circ$ . Claims 13-15 are withdrawn.

### REMARKS/ARGUMENTS

Claim 9 was rejected under 35 U.S.C. §102(b) as being anticipated by Work, U.S. Patent No. 2,241,337. Reconsideration of the rejection is respectfully requested.

Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Stark, WO 01/16493, in view of Frenzl, U.S. Patent No. 3,823,872. Reconsideration of the rejection is respectfully requested.

Claims 10-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Work. Reconsideration of the rejection is respectfully requested.

Claims 10-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Stark in view of Frenzl. Reconsideration of the rejection is respectfully requested.

Independent claim 9 has been amended to provide, in part, for, "the second porous diverging section having holes with sizes in the range of 50 to 500  $\mu\text{m}$ ." Antecedent basis for the amendment is found in the specification, for example, on page 10, lines 19-21. The specification indicates that this range of hole sizes "are used to provide a relatively silent suction (low noise levels) without reducing the suction capacity," (page 10, lines 20-21).

In support of the rejection of claim 9 based upon Work, the Examiner alleges that the second porous diverging section is found as element 29 in Work, (Office Action, page 2, paragraph 4, line 4). However, element 29 is disclosed in Work as merely ports used by air entering the device 15, (page 2, left column, lines 16-17), and there does appear to be any teaching, disclosure, or suggestion as to the size of these ports in Work.

In support of the rejection of independent claim 9 based upon Stark in view of Frenzl, the Examiner indicates that Frenzl teaches a diverging section (18, 22), which is porous, (Office Action, page 4, line 3). Frenzl appears to disclose a porous intermediate part 21, bordering on diverging zone 22. Porous intermediate part 21 appears to conduct steam, the steam traveling from a source through a conduit 27 and porous intermediate part 21, (column 5, lines 29-49; Fig. 1). There does not appear to be any teaching, disclosure, or suggestion of the size of the pores in porous intermediate part 21.

Since each of claims 10-12 is directly dependent upon independent claim 9, each of claims 10-12 is allowable for at least the same reasons recited above with respect to the allowability of independent claim 9.

In view of the foregoing amendments and remarks, allowance of claims 9-12 is respectfully requested, claims 1-8 and 13-15 having been withdrawn from consideration.

Respectfully submitted,

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--DRAFT--

RCF/MIM:lac

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